

REMARKS

Claims 1-24 are pending. Claims 1-24 were rejected. Independent claims 1, 14, and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cruz, "Linux Kernel: Problem with interfaces and ioctl", August 1, 2001 in view of Weinstein, "Zombie Process." Dependent claim 2 and independent claims 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cruz and Weinstein and further in view of Faulkner (USP 6,002,870).

Cruz notes that "a zombie process is created" each time ioctl is used to "change the IFF_UP flag." Weinstein describes reaping zombie processes. "The only way is to get the process's parent to execute the wait system call. Generally shells are the parents of processes. A shell will "reap" all of its outstanding children just after it executes a command and before it prompts for the next command... just executing a command (or often just hitting a carriage return to force the next prompt) is sufficient to cause the shell to execute the wait call." (paragraph on pages 2-3).

"If, however, the parent process is hung, it will never reap its children, which means that the zombies will stay there... So killing the parent will cause all of its child zombie processes to be reassigned to init, which will immediately reap them." (first full paragraph on page 3).

However, neither Cruz nor Weinstein teach or suggest "modifying the parent process" to allow the "parent process to collect exit information associated with the defunct child process," as is explicitly in independent claims 1, 14, and 17. As noted by the Examiner "Cruz doesn't explicitly disclose modifying the parent process associated with the defunct child process." Furthermore, however, Weinstein also fails to teach or suggest "modifying the parent process to collect exit information."

Weinstein only describes "just executing a command (or often just hitting a carriage return to force the next prompt) is sufficient to cause the shell to execute the wait call" or "killing the parent." However, neither executing a command nor killing the parent are "modifying the parent process to collect exit information." Consequently, the rejections to claims 1, 14, and 17 are believed overcome.

Dependent claims 2 and 9 and independent claim 20 were rejected under Cruz and Weinstein and further in view of Faulkner. Faulkner is described in the present application on page 15, lines 22-27. "In another embodiment, a process is modified by attaching an agent thread to the parent process. Attaching an agent thread is described in U.S. Patent No. 6,002,870 titled Method and Apparatus For Nondamaging Process Debugging Via An Agent Thread, the entirety of which is incorporated by reference for all purposes. It should be noted that entities referred to herein as threads may also be referred to as light weight processes in various embodiments."

The Examiner argues that there would have been motivation to combine Cruz and Weinstein and Faulkner because one "would have been motivated to save the finite process table slots by deleting the dead (defunct/zombie) process." The Applicants respectfully disagree. Faulkner describes a technique for modifying a process by attaching an agent thread. However, Faulkner makes no mention of zombie processes or defunct processes. Modifying a process by attaching an agent thread and reaping zombie process or defunct processes are distinct ideas merged by the techniques and mechanisms of the present invention. In fact, Weinstein suggests that there was no motivation to combine because Weinstein only describes "just executing a command (or often just hitting a carriage return to force the next prompt) is sufficient to cause the shell to execute the wait call" or "killing the parent."

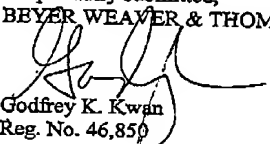
None of the references cited nor any other source provides sufficient motivation to combine Cruz and Weinstein and Faulkner. Consequently, it is respectfully submitted that the rejections to dependent claims 2 and 9 and independent claim 20 are overcome.

In light of the above remarks relating to independent claims 1, 14, 17, and 20 and dependent claims 2 and 9, the remaining dependent claims are believed allowable for at least the reasons noted above.

CONCLUSION

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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